

CLAIMS

1. A screening process for discovering an agonist or antagonist for human SMBP, which comprises

1) contacting a transformed cell or the cellular membrane fraction thereof with a test compound, and

2) measuring the SMBP-binding activity of a test compound to select a SMBP ligand among the test compounds,

wherein the SMBP ligand is an agonist for human SMBP when it down-regulates the contraction of intestine or inhibits the migration of eosinophils, and the SMBP ligand is an antagonist for human SMBP when it shows the inverse activities, and

wherein the transformed cell as defined in step 1) is obtained by culturing cells transformed with an expression vector carrying the DNA of any one of the following (a) to (e) under an appropriate condition:

(a) an isolated DNA encoding a human SMBP, wherein said DNA comprises a nucleotide sequence of SEQ ID NO:1, with the exception that a sequence comprising the polythymidine sequence from positions 1899 to 1935 of SEQ ID NO:1 is deleted from a 3'-region from position 1875 in the nucleotide sequence of SEQ ID NO: 1; and the SMBP translation product of said isolated DNA is expressed at an elevated level compared to the level of expression of a DNA comprising unmodified SEQ ID NO:1;

(b) the DNA of (a), wherein said DNA comprises a nucleotide sequence of SEQ ID NO:1, with the exception that the polythymidine sequence from positions 1899 to 1935 of SEQ ID NO: 1 is deleted;

(c) the DNA of (a), wherein said DNA comprises a nucleotide sequence of SEQ ID NO:1, with the exception that the nucleotide sequence from positions 1875 to 2072 of SEQ ID NO: 1 is deleted;

(d) an isolated DNA which consists of the nucleotide sequence of SEQ ID NO: 3; and

(e) the DNA of any one of (a), (b), or (c), wherein the surrounding sequence of the start codon is replaced with Kozac sequence of SEQ ID NO:5.